

Map Archive on Institute of Geography, Masaryk University – New Possibilities

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Abstract. The aim of the poster is to present ongoing process of cataloguing, digitization and accessibility old map archive on Institute of Geography, Faculty of Science, Masaryk University and introduce tools developed for old map cataloguing and processing. This contribution was created with the support of the Ministry of Culture of the Czech Republic, Nr. DF11P01OVV003: TEMAP: Technology for access to Czech map collections: methodology and software for protection and re-use of national cartographic heritage.

Keywords: Old map, map archive

1. Introduction

Old maps are valuable source of natural, socio-economic etc. information which is frequently not fully available even if archives make digital raster images accessible. Map archive of Institute of Geography was transformed due to project TEMAP into digital form. It consists of providing digital images with standardized metadata description developed with focus on old maps to each map. Each record contains e.g. geographic coordinates of minimal bounding rectangle, main topics of the map information etc. Mentioned process will enable more effective searching and therefore should increase usability of old map information.

2. Map archiving on Masaryk University

2.1. History of Map Archive

Map archiving on Institute of Geography started shortly after foundation of the Masaryk University in 1919. Map archive was designed as specialized collection focused on maps of Moravia. Number of maps was increasing till

the 1973 when few thousand of maps had to be transferred due to security status to the military service. Currently there are over 18000 maps and atlases (see table 1), while most famous are collections of Comenius' map of Moravia from the 17th century and atlases published by famous Dutch cartographer Abraham Ortelius from the 16th century (see chapter 2.2).

Year	1930	1952	1975	1990
Number of maps	2076	7328	21981	16096

Table 1. Number of maps deposited in the map archive of Institute of Geography Masaryk University.

Catalogue records were till the beginning of 21st century only in the analog form, which complicated searching, maintenance and overall usability of old maps and old map information.

2.2. Selected example of archived map

As it was previously mentioned map archive is focused on maps of Moravia Comenius' map of Moravia is considered the most popular cartographic product of our historic lands of all times, hence there is one example.

1.1.1. J. A. Comenius' map of Moravia

For the first time, it was published from a large copper printing plate (referred to as KMM P) in 1624 in the workshop of J. N. Visscher-Piscator in Amsterdam. Consequently, it was printed from more than 10 different printing plates for more than 150 years.

Opinions on date of its creation and its purpose still differ. However, some questions have been answered by Comenius himself. The translation of Latin dedication (by J. Chamonikolas) presented on Goos' large printing plates of Comenius' map of Moravia runs as follows:

To His Grace LADISLAV VELEN of Žerotín, the most illustrious Lord of Břeclav, Třebová, Zábřeh and Ruda, my dearest master.

There exist many and various topographical maps of my native country, my illustrious lord, but they all abound in errors; to my knowledge only Paul Fabricius, the onetime doctor to the Emperor Ferdinand, prepared a map of the country after previous researches. All the subsequent maps that have been issued since that time have been modelled on it, and in various ways various mistakes have crept in. In the first

place, numerous important localities are omitted while unimportant ones are included; next, the names are queerly distorted, and, what is most serious, the position of the localities and their distances hardly correspond to reality. Consequently, they are almost useless. Therefore I could not but attempt, in this my involuntary leisure, to improve the map; for I have travelled through Moravia many a time and if it was not granted me to visit some localities myself and survey them with my own eyes, I carefully consulted people familiar with the places. And this was how I worked. In the map, I included firstly cities and towns; secondly castels and country houses, fortresses, abbeys, most of the more important villages; thirdly mountains and rivers that a traveller must cross or that are to be seen, and similarly springs, mined, glass works, vineyards; fourthly (and these I worked out especially) more precise distances between all the localities. Lastly, since many local names in Czech, the language used by the majority of the people, differ from those German, I sometimes give both names in order to make the map useful for speakers of both languages. I dedicate the map to you, Your Honour, the foremost lord of our country, and great protector of mine; I pray to God to return you to my country and my country to you, to the great joy of both, as soon as possible.

Written in exile.

Your Grace's humble servant,

J. A. COMENIUS

Reactions to Comenius' map of Moravia were exceptional already during the time of its publication and practical use. Comenius map presented on figure 1 was printed in 1627.



Figure 1. Example of Comenius map of Moravia from 1627 (Map Archive of Institute of Geography, Masaryk University).

3. TEMAP project

Situation described in chapter 2.1 is changing due to cooperation with Moravian Library and Charles University in Prague on project called Technology for access to Czech map collections (TEMAP). Aims of the project can be divided into two main parts. At first there is digitization and accessibility of map archives of each partner (Example of maps from map archive of Institute of Geography were mentioned above). On the other hand there is development of various tools for simplifying of mentioned process. Both parts will contribute to broad old map information accessibility and usage.

3.1. Cataloguing of map archive

Cataloguing profile focused on old maps was designed with cooperation of Moravian Library in Brno. Designed specialized profile was implemented to

the library software Aleph (Aleph.muni.cz). It is estimated, that all records will in digital form in approximately 10 years, due to limited resources.

Cataloguing is primarily focused on oldest and most valuable parts of map archive and requested map sheets for research and educational purposes. Digitized metadata are transferred also to the Union Catalogue of the Czech Republic.

3.2. Digitalization and accessibility of map archive

There is digitization process simultaneously with cataloguing. Digitization of map sheets to the size A0+ and smaller are used equipments available on Institute of Geography. All digitized map sheets obtained unique identification number. Storage of original and digitized maps was optimized with respect on long term storage.

Digitized map sheets without copyright law limitations are successively made accessible on web page of Institute of Geography (see figure 2) Accessible maps are in full resolution and with watermarking.

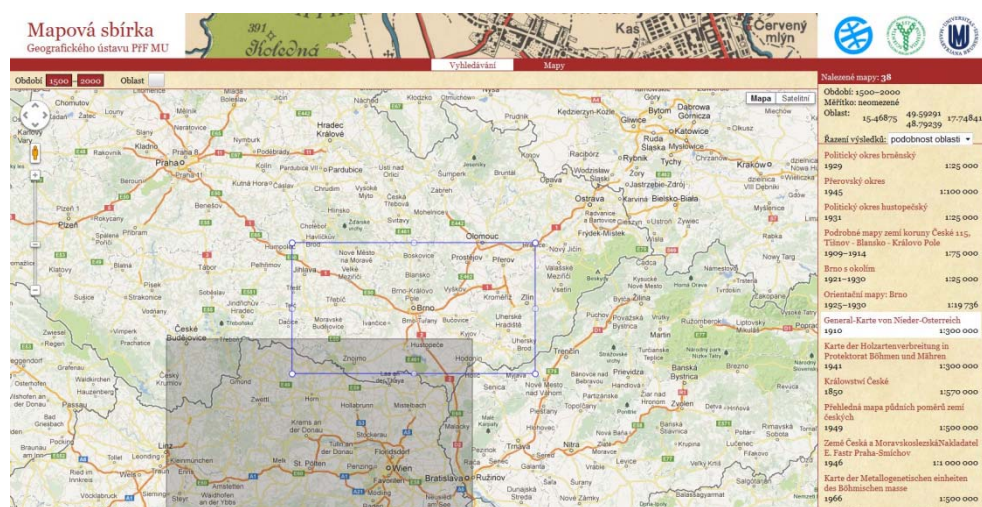


Figure 2. Application for old map accessibility (available at mapy.geogr.muni.cz).

3.3. Tools for cataloguing

Process of standardized cataloguing of map series is very complex, therefore there is need for appropriate tool. Development started with design of data model, which contain terms map sheet, map sheet system, map series etc.

Next step was focused on collecting of available map sheets primarily existing in the Czech Republic. Currently tool enable generating of unified metadata to selected map sheet from supported map series (see figure 3).

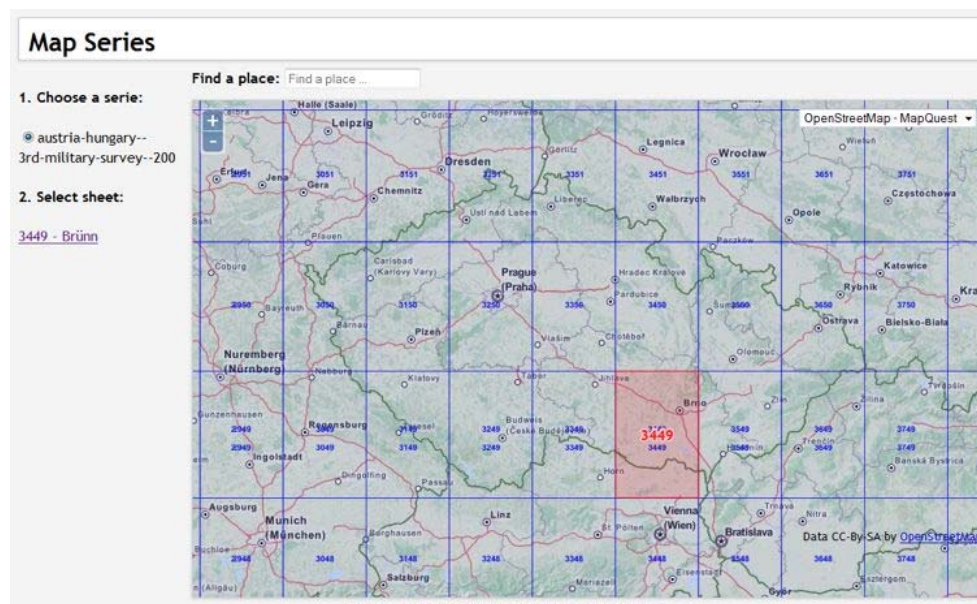


Figure 3. Tool for map series cataloguing – Austro-Hungarian Third military survey.

4. Conclusion

Old maps are important part of cartographic cultural heritage. Attention paid to this topic is mainly focused on accessibility of old maps. But there is a need for redefining this attitude and provide more attention to process of cataloguing and digitization of old maps. Especially metadata information created within the cataloguing process can contribute to increase of the old map information easy findable and thus usable. Project TEMAP provide on one hand more digitized maps but on the other hand various tools for extended old map metadata creation thus will contribute to preservation and publicity of cartographic cultural heritage.

This contribution was created with the support of the Ministry of Culture of the Czech Republic, Nr. DF11P01OVV003: TEMAP: Technology for access to Czech map collections: methodology and software for protection and re-use of national cartographic heritage (see www.temap.cz).

References

Library system Aleph, Library of Masaryk University. <http://aleph.muni.cz>. Accessed 9 March 2013

Map archive of Institute of Geography, Masaryk University. <http://mapy.geogr.muni.cz>. Accessed 19 March 2013

TEMAP: Technology for access to Czech map collections: methodology and software for protection and re-use of national cartographic heritage, <http://temap.cz>. Accessed 12 March 2013